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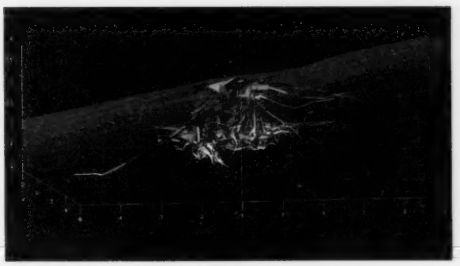
Cover Photo: The Finite Element Method was used to calculate the strength of tree root anchorage, with a digitized Maritime pine (*Pinus pinaster* Ait.) root system shown here as an example (data from F. Danjon, INRA). This numerical method was not only used on real root systems, but also applied to simulated schematic root patterns. These theoretical investigations provided information concerning various aspects of tree anchorage mechanics, with regard to both root morphology and soil characteristics. It was shown for instance that the soil type significantly modifies the mode of failure of the root/soil plate. It was also demonstrated that, for a given total root biomass, heart-root systems are the most resistant pattern in clay-like soil and tap-root anchorage efficiency is higher in sandy-like soil. *Plant and Soil* Vol 278, pp. 119–134.